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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/806,643	03/23/2004	Jeffrey J. Schroeder	35691US1	2569

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EXAMINER
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VO, HAI

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 07/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/806,643	Applicant(s) SCHROEDER ET AL.	
	Examiner Hai Vo	Art Unit 1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 May 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 10-46 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 19, 20 and 39-46 is/are allowed.
- 6) ☒ Claim(s) 1-7, 10-18, 21-25, and 27-38 is/are rejected.
- 7) ☒ Claim(s) 26 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>0705, 0502</u> . | 6) <input type="checkbox"/> Other: _____  |

*[Handwritten signature]*

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1. There is no insufficient antecedent basis for this limitation in claim 32. The examiner is wrong about the 112 claim rejections in the previous Office Action .
2. All of the art rejections are maintained.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 3, 4, 10-12, 37 and 38 are rejected under 35 U.S.C. 102(b) as being anticipated by DE 1949657B substantially as set forth in the 01/27/2005 Office Action. The viscoelastic property renders the foam deformable to accommodate a particular shape and contour to which the building element is to be bent.

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Applicants did not distinctly and specifically point out the supposed errors in the rejections, the rejections therefore are sustained.

6. Claims 24, 27, 28, and 32-36 are rejected under 35 U.S.C. 102(b) as being anticipated by Seibert (US 5,849,407) substantially as set forth in the 01/27/2005 Office Action. The art rejections have been maintained for the following reasons. Applicants argue that Seibert discloses a metal-foam-metal-foam structure, which is not a metal-foam-foam structure as required by the claims. The examiner disagrees. The arguments are not commensurate in scope with the claims. Nothing in the claims is specific about the semi-rigid foam and the foam layer absorber to be in direct contact with one another as argued by Applicants. The term "adhered" does not necessarily mean they are in direct contact with one another. Accordingly, the art rejections are thus sustained.
7. Claims 24, 27-31, 34, and 36 are rejected under 35 U.S.C. 102(b) as being anticipated by Holtrop et al (US 4,557,970) substantially as set forth in the 01/27/2005 Office Action.
8. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Holtrop et al (US 4,557,970) as applied to claim 24 above, further in view of Lynn et al (US 6,093,481) substantially as set forth in the 01/27/2005 Office Action. The art rejections have been maintained for the following reasons. Applicants argue that Holtrop does not disclose a laminate structure comprising the metallic outer layer. The examiner disagrees. Holtrop discloses a sheet 21 comprising a

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composite of Kraft paper and aluminum foil which reads on Applicants' metallic layer (column 4, lines 15-19). Accordingly, the art rejections are thus sustained.

9. Claims 24, 27-30, 34, and 36 are rejected under 35 U.S.C. 102(b) as being anticipated by Lohmar et al (US 4,839,397) substantially as set forth in the 01/27/2005 Office Action. The art rejections have been maintained for the following reasons. Applicants argue that Lohmar does not teach the mass layer 6 being a foam layer. The examiner disagrees. Lohmar discloses a laminate structure comprising a metal substrate 1, a polyurethane soft foam layer 4, a mass layer 6, a decoupler 7 and a carpet 8 (figures 5 and 6). Lohmar discloses the mass layer is a foam material (column 2, lines 48-50). Accordingly, the art rejections are thus sustained.
10. Claims 1-7, 10-12, 37 and 38 are rejected under 35 U.S.C. 102(e) as being anticipated by Davis (US 6,579,170) substantially as set forth in the 01/27/2005 Office Action. The art rejections have been maintained for the following reasons. Applicants argue that Davis does not disclose or suggest a deformable foam but rather a rigid foam. The examiner disagrees. The passage at column 3, lines 36-40 suggests the presence of the inner shell and outer shell provides structural support to the foam. The passage does not indicate that the foam is not deformable. Davis discloses the rigid foam is preferable because it is not susceptible to being crushed or damaged during installation handling (column 1, lines 15-30). This is exactly what the "rigid foam" is defined in the present specification [0041]. Further, it is known in the art the air duct is bent to an arc

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shape or U shape during installation of duckwork in residential and commercial HVAC system. Davis discloses the polyurethane foam having a density of 2lb/ft<sup>3</sup>, a thickness within the claimed range. The low density, lightness and thinness are sufficient to render the foam deformable to accommodate a particular contour to which the air duct system is to be bent. Therefore, it is the examiner's position that the foam would be substantially inherently deformable to accommodate a particular contour to which the air duct system is to be bent for successful installation of the air duct.

11. Claims 1-4, 7, 10-13, 37 and 38 are rejected under 35 U.S.C. 102(e) as being anticipated by Spears et al (US 6,455,148) substantially as set forth in the 01/27/2005 Office Action. The art rejections are maintained for the following reasons. The examiner respectfully points out that there is nothing wrong to incorporate the functional language into the article claims. However, article claims must be structurally distinguishable from the prior art. While features of the article may be recited either structurally or functionally, claims directed to an article must be distinguished from the prior art in terms of structure rather than function. *In re Swinehart*, 439 F.2d 210, 212-13, 169 USPQ 226, 228-29 (CCPA 1971); *In re Danly*, 263 F.2d 844, 847, 120 USPQ 528, 531 (CCPA 1959). The examiner never argues that the "deformation" limitation renders the claim indefinite. What the examiner wants to argue is that this property must be inherently present in the prior art because the article of the prior art meets all the structural limitations as required by the claims. Applicants argue the Spears

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teaches away the foam having deformable property because Spears, not Lynn as pointed out by Applicants, discloses the rigid core made from HDPE and rigid PVC (column 3, lines 36-38). The examiner disagrees. First, Applicants and Spears use a rigid foam material to form the foam core. Second, Spears teaches a composite panel comprising a foamed plastic core and two metallic skin layers bonded to the foam core (figure 1). The skin layer has a thickness from 0.2 to 0.5 mm within the claimed range. The foam core has a thickness from 1.5 to 5 mm within the claimed range. Additionally, Spears disclose the composite panel has improved flexural modulus which is an indicative of flexural property (column 3, lines 15-20). Therefore, the deformable property would be inherently present for improved flexural modulus. Spears discloses the composite panel can be formed into a variety of shapes having different lengths, widths and thickness (column 5, lines 10-13). Likewise, it is clearly apparent that the foam itself must be deformable to accommodate a particular shape to which the composite panel to conform in use. Like material has like property. Accordingly, the deformable property would be inherently present. Therefore, the art rejections are sustained.

12. Claims 1-7, 10-12, 14-16, 37 and 38 are rejected under 35 U.S.C. 102(b) as being anticipated by Lynn et al (US 6,093,481) substantially as set forth in the 01/27/2005 Office Action.

13. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lynn et al (US 6,093,481) substantially as set forth in the 01/27/2005 Office Action.

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14. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lynn (US 6,093,481) as applied to claim 1 above, further in view of Hipchen et al (US 4,028,158) substantially as set forth in the 01/27/2005 Office Action.
15. Claims 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lynn et al as applied to claim 1 above, and further in view of Hasegawa et al (US 4,923,904) substantially as set forth in the 01/27/2005 Office Action. The art rejections are maintained for the following reasons. Applicants argue that Lynn teaches away the foam having a deformable property. The examiner disagrees. Lynn teaches an insulation board comprising a rigid polyurethane foam having a thickness of ½ inch and density of 1.72 lb/ft<sup>3</sup> within the claimed ranges (table II). The lightness and thinness again are sufficient to render the foam deformable to accommodate a particular shape to which the composite panel to be bent. Therefore, the art rejections are thus sustained.

***Allowable Subject Matter***

16. Claims 19, 20, 26 and 39-46 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. None of the prior art discloses or suggests the heat shield wherein the foam layer absorber is a closed cell polyvinyl nitrile foam layer. Additionally, the inclusion of the absorber layer formed from fluffy fibers having a thickness of about ¼ to ½ inch renders the claims unobvious over the prior art. Lynn teaches an insulation board comprising in order: a film layer 11, a fibrous layer 22, an aluminum foil 23, a



polyurethane foam core 13, an aluminum foil 24 and a film layer 12 (figure 3).

The fibrous layer 22 of the Lynn invention corresponds to Applicants' fluffy fiber absorber layer. Lynn teaches the fibrous layer having a thickness from 0.3 mil to 5 mils or 0.0003 to 0.005 inch (column 5, lines 20-25), which is about 50 times less than the lower limit of the range set out in the claim. One of skill in the art would not be motivated to increase the thickness of the facing sheet of Lynn to 0.25 inch as required by the claims from the impractical view of weight concern and cost increasing.

### ***Conclusion***

**17. THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

**18.** Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai Vo whose telephone number is (571) 272-

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1485. The examiner can normally be reached on M,T,Th, F, 7:00-4:30 and on alternating Wednesdays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HV

*Haivo*

**HAIVO  
PRIMARY EXAMINER**